

**IN THE CLAIMS:**

*Please amend the claims as follows:*

1. *(currently amended)* A ~~demultiplexing method for supplying input data received from an input channel to a plurality of output channels;~~

~~wherein said plurality of output channels are connected to a plurality of physical protocol layer devices having the same interface address allocated;~~  
comprising the steps of:

[[a]] providing an input buffer connected to ~~said an~~ input channel and a plurality of output buffers respectively connected to ~~said a~~ plurality of output channels connected to a plurality of physical protocol layer devices having the same interface address allocated;

[[b]] storing ~~said~~ input data received from said input channel in said input buffer;

[[c]] determining whether all of the output buffers have signaled their capability of receiving data,

[[d]] if not, ~~step c) is repeated~~ repeating determining whether all of the output buffers have signaled their capability of receiving data until a corresponding indication of capability of receiving data has been received from all output buffers, and

[[e]] releasing transmission of said input data from said input buffer to said plurality of output buffers, when all of said plurality of output buffers have signaled their capability of receiving data.

2. *(currently amended)* [[A]] The method according to claim 1, wherein said input and output buffers are FIFO first in first out buffers.

3. *(currently amended)* [[A]] The method according to claim 2, wherein said plurality of physical protocol layer devices are ~~UTOPIA~~ universal test and operations physical layer for asynchronous transfer mode level 1 compliant.

4. *(currently amended)* [[A]] The method according to claim 3, wherein said plurality of output channels are connected to a plurality of ATM asynchronous transfer mode devices having the same interface address allocated.

5. *(currently amended)* ~~[[A]]~~ The method according to claim 4, wherein said input channel is connected to an ATM asynchronous transfer mode device.

6. *(currently amended)* ~~[[A]]~~ The method according to claim 5, wherein said ATM asynchronous transfer mode device is ~~UTOPIA~~ universal test and operations physical layer for asynchronous transfer mode level 1 or level 2 compliant.

7. *(currently amended)* ~~[[A]]~~ The method according to claim 6, ~~including a multiplexing method for supplying input data received from one of a plurality of the output channels now functioning as input channels, to the input channel now functioning as an output channel, comprising the steps of:~~

~~[[a)]]~~ using said output buffers as a plurality of input buffers respectively connected to said plurality of input channels; ~~and;~~

using the input buffer as an output buffer connected to said output channel;

~~[[b)]]~~ storing said received input data in a respective one of said plurality of input buffers; ~~and,~~

~~[[c)]]~~ releasing transmission of said input data from said respective one of said plurality of input buffers to said output buffer, when said output buffer is capable of receiving data.

8. *(currently amended)* ~~A demultiplexing~~ An apparatus for supplying input data ~~received from an input channel of said demultiplexing apparatus to a plurality of output channels thereof, wherein said plurality of output channels are connected to a plurality of physical protocol layer devices having the same interface address allocated;~~  
comprising:

an input channel configured to receive input data;

~~[[a)]]~~ an input buffer ~~means for storing~~ configured to store said input data;

~~[[b)]]~~ a plurality of output ~~buffer means~~ buffers configured to receive data from said input buffer respectively connected to said a plurality of output channels, wherein said plurality of output channels are connected to a plurality of physical protocol layer devices having the same interface address allocated; and

~~[[c)]]~~ ~~control means for determining~~ a controller configured to determine whether all of the output buffers have signaled their capability of receiving data, ~~for repeating~~

~~configured to repeat the determining determination~~ until a corresponding indication of the capability of receiving data has been received from all output buffers, and ~~for releasing configured to release~~ a transmission from said input buffer means to said plurality of output ~~buffer means buffers~~, when all of said plurality of output ~~buffer means buffers~~ have signalized their capability of receiving data.

9. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 8, wherein said input and output buffer means are FIFO first in first out buffers.

10. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 9, wherein said ~~control means is arranged~~ controller is configured to receive a control signal indicating the receiving capability from anyone of said plurality of output ~~buffer means buffers~~, and configured to supply a release signal to said input buffer means, when said control signal has been received from all of said plurality of output ~~buffer means buffers~~.

11. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 10, wherein said input channel is connected to an ATM asynchronous transfer mode device.

12. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 11, wherein said ATM asynchronous transfer mode device is UTOPIA universal test and operations physical layer for asynchronous transfer mode level 1 or level 2 compliant.

13. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 12, wherein said plurality of physical protocol layer devices are UTOPIA universal test and operations physical layer for asynchronous transfer mode level 1 compliant.

14. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 13, wherein said output channels are connected to a plurality of ATM asynchronous transfer mode devices having the same interface address allocated.

15. *(currently amended)* ~~[[An]]~~ The apparatus according to claim 14, ~~forming a multiplexing apparatus for supplying input data received from one of the plurality of the~~

~~output channels now serving as input channels of said multiplexing apparatus to the input channel now serving as an output channel thereof, comprising:~~

~~said plurality of output channels configured to serve as a plurality of input channels;~~

~~said input channel configured to serve as an output channel;~~

~~the plurality of output buffer means serving buffers configured to serve as a plurality of input buffer means buffers respectively connected to said plurality of input channels, wherein said input data is stored in a respective one of said plurality of input buffer means buffers; the input buffer means buffer configured to serve serving as an output buffer means buffer connected to said output channel;~~

~~the control means being adapted for releasing the controller configured to release a transmission from said respective one of said plurality of input buffer means buffers to said output buffer means buffer, when said output buffer means buffer is capable of receiving data.~~

16. *(currently amended)* [[A]] The method according to claim 1, wherein said plurality of physical protocol layer devices are UTOPIA universal test and operations physical layer for asynchronous transfer mode level 1 compliant.

17. *(currently amended)* [[A]] The method according to claim 1, wherein said plurality of output channels are connected to a plurality of ATM asynchronous transfer mode devices having the same interface address allocated.

18. *(currently amended)* [[A]] The method according to claim 1, wherein said input channel is connected to an ATM asynchronous transfer mode device.

19. *(currently amended)* [[A]] The method according to claim 4, wherein said ATM asynchronous transfer mode device is UTOPIA universal test and operations physical layer for asynchronous transfer mode level 1 or level 2 compliant.

20. *(currently amended)* [[A]] The method according to claim 1, including a multiplexing method for supplying input data received from one of a plurality of the output channels now functioning as input channels, to the input channel now functioning as an output channel, comprising the steps of:

[[a]] using said output buffers as a plurality of input buffers respectively connected to said plurality of input channels, ~~and;~~

using the input buffer as an output buffer connected to said output channel;

[[b]] storing said received input data in a respective one of said plurality of input buffers; and,

[[c]] releasing transmission of said input data from said respective one of said plurality of input buffers to said output buffer, when said output buffer is capable of receiving data.

21. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 8, wherein said ~~control means is arranged~~ controller is configured to receive a control signal indicating the receiving capability from anyone of said plurality of output ~~buffer means~~ buffers, and to supply a release signal to said input buffer ~~means~~, when said control signal has been received from all of said plurality of output ~~buffer means~~ buffers.

22. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 8, wherein said input channel is connected to an ATM asynchronous transfer mode device.

23. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 8, wherein said plurality of physical protocol layer devices are ~~UTOP1A~~ universal test and operations physical layer for asynchronous transfer mode level 1 compliant.

24. *(currently amended)* ~~A demultiplexing~~ The apparatus according to claim 8, wherein said output channels are connected to a plurality of ATM asynchronous transfer mode devices having the same interface address allocated.

25. *(currently amended)* ~~An~~ The apparatus according to claim 8, ~~forming a multiplexing apparatus for supplying input data received from one of the plurality of the output channels now serving as input channels of said multiplexing apparatus to the input channel now serving as an output channel thereof,~~ comprising:

said plurality of output channels configured to serve as a plurality of input channels;

said input channel configured to serve as an output channel;

the plurality of output ~~buffer means serving~~ buffers configured to serve as a plurality of input ~~buffer means~~ buffers respectively connected to said plurality of input channels, wherein said input data is stored in a respective one of said plurality of input ~~buffer means~~ buffers; the input ~~buffer means~~ buffer configured to serve serving as an output ~~buffer means~~ buffer connected to said output channel;

~~the control means being adapted for releasing~~ the controller configured to release a transmission from said respective one of said plurality of input ~~buffer means~~ buffers to said output ~~buffer means~~ buffer, when said output ~~buffer means~~ buffer is capable of receiving data.

26. (New) An apparatus comprising:

means for receiving input data;

means for storing said input data;

means for receiving data from said means for storing said input data respectively connected to means for connecting to means for having the same interface address allocated;

means for determining whether all of the means for receiving said data from said means for storing said input data have signaled their capability of receiving said data, and for repeating said determining until a corresponding indication of the capability of receiving data has been received from all the means for receiving said data from said means for storing said input data; and

means for releasing a transmission from said means for storing said input data to said means for receiving said data from said means for storing said input data, when all of said means for receiving data from said means for storing said input data have signaled their capability of receiving data.

27. (New) The apparatus according to claim 26, further comprising:

means for receiving a control signal indicating the receiving capability from anyone of said means for receiving data from said means for storing said input data; and

means for supplying a release signal to said means for storing said input data, when said control signal has been received from all of said means for receiving data from said means for storing said input data.

28. (New) A system comprising:  
the apparatus of claim 8; and  
at least one asynchronous transfer mode device;  
wherein the apparatus of claim 8 is coupled to said at least one asynchronous  
transfer mode device.